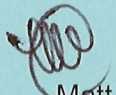


STATE OF NEW HAMPSHIRE  
INTER-DEPARTMENT COMMUNICATION

 **DATE:** January 25, 2016

**FROM:** Matt Urban  
Wetlands Program Manager **AT (OFFICE):** Department of  
Transportation

**SUBJECT** Dredge & Fill Application Bureau of  
Sugar Hill, 40489 Environment

**TO** Gino Infascelli, Public Works Permitting Officer  
New Hampshire Wetlands Bureau  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject Major impact project. This project is classified as Major per Env-Wt 303.02(p). The project is located on NH Route 18/116 over Indian Creek in the Town of Sugar Hill. The existing structure is a metal pipe arch that is 8'-9" wide and 6'-0" wide. The invert has up to 50% section loss in the last 10'-0" at the outlet. The pipe is extensively holed throughout. A portion of the structure is buckled and there are small voids throughout. The metal pipe is undersized and will be replaced with a 22'-0" span concrete slab bridge.

This project was reviewed at the December 16, 2015 Natural Resource Agency Coordination Meeting. The minutes from that meeting are available on the Departments website via the following link: <http://www.nh.gov/dot/org/projectdevelopment/environment/units/project-management/nracrmeetings.htm#S>

This project does not require mitigation. The Department agreed at the Natural Resource Agency Meeting to provide vegetated banks outside of the structure.

The lead people to contact for this project are Steve Johnson, Assistant Administrator, Bureau of Bridge Maintenance (271-3668 or [sjohnson@dot.state.nh.us](mailto:sjohnson@dot.state.nh.us)) or Matt Urban, Wetlands Program Manager, Bureau of Environment (271-3226 or [murban@dot.state.nh.us](mailto:murban@dot.state.nh.us)).

A payment voucher has been processed for this application (Voucher #423293) in the amount of \$200.

If and when this application meets with the approval of the Bureau, please send the permit directly to Matt Urban, Wetlands Program Manager, Bureau of Environment.

MRU:mru  
Enclosures

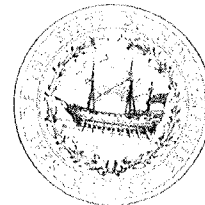
cc:  
BOE Original  
Town of Sugar Hill (4 copies via certified mail)  
Randy Talon, Environment  
Carol Henderson, NH Fish & Game  
Edna Feighner, NH Division of Historic Resources (DOT cultural review within).  
Maria Tur, US Fish & Wildlife  
Mark Kern, US Environmental Protection Agency  
Michael Hicks, US Army Corp of Engineers





THE STATE OF NEW HAMPSHIRE  
DEPARTMENT OF ENVIRONMENTAL SERVICES  
LAND RESOURCES MANAGEMENT  
**WETLANDS BUREAU**

29 Hazen Drive, PO Box 95, Concord, NH 03302-0095  
Phone: (603) 271-2147 Fax: (603) 271-6588  
<http://des.nh.gov/organization/divisions/water/wetlands>



## PERMIT APPLICATION

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No. _____
			Check No. _____
			Amount _____
			Initials _____

### 1. REVIEW TIME:

Indicate your Review Time below. Refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact)

☐ Expedited Review (Minimum Impact)

### 2. PROJECT LOCATION:

Separate applications must be filed with each municipality that jurisdictional impacts will occur in.

ADDRESS: **NH Rte. 18, 116 over Indian Creek**

TOWN/CITY: **Sugar Hill**

TAX MAP: \_\_\_\_\_

BLOCK: \_\_\_\_\_

LOT: \_\_\_\_\_

UNIT: \_\_\_\_\_

USGS TOPO MAP WATERBODY NAME: **Indian Creek**

☐ NA

STREAM WATERSHED SIZE: **5.26 mi2**

☐ NA

LOCATION COORDINATES (If known): **044°14'47.48" 071°45'45.63"**

☐ UTM ☐ State Plane

☒ Latitude/Longitude

### 3. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

**The existing structure is a metal pipe arch that is 8'-9" wide and 6'-0" wide. The invert has up to 50% section loss in the last 10'-0" at the outlet. The pipe is extensively holed throughout. A portion of the structure is buckled and there are small voids throughout. The metal pipe is undersized and will be replaced with a 22'-0" span concrete slab bridge.**

### 4. RELATED PERMITS, ENFORCEMENT, EMERGENCY AUTHORIZATION, SHORELAND, ALTERATION OF TERRAIN, ETC...

### 5. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB **15 - 3797**

b. ☐ Designated River the project is in ¼ miles of: \_\_\_\_\_; and  
date a copy of the application was sent to Local River Advisory Committee: Month: \_\_\_\_ Day: \_\_\_\_ Year: \_\_\_\_

☒ NA

**6. APPLICANT INFORMATION (Desired permit holder)**LAST NAME, FIRST NAME, M.I.: **Johnson, Steve W**TRUST / COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **7 Hazen Drive**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **sjohnson@dot.state.nh.us**PHONE: **603 271 3667**ELECTRONIC COMMUNICATION: By initialing here: SW, I hereby authorize DES to communicate all matters relative to this application electronically**7. PROPERTY OWNER INFORMATION (If different than applicant)**

LAST NAME, FIRST NAME, M.I.:

TRUST / COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY:

STATE:

ZIP CODE:

EMAIL or FAX:

PHONE:

ELECTRONIC COMMUNICATION: By initialing here \_\_\_\_\_, I hereby authorize DES to communicate all matters relative to this application electronically

**8. AUTHORIZED AGENT INFORMATION**LAST NAME, FIRST NAME, M.I.: **Weatherbee, Anthony N**COMPANY NAME: **NH Dept. of Transportation**MAILING ADDRESS: **7 Hazen Drive**TOWN/CITY: **Concord**STATE: **NH**ZIP CODE: **03302**EMAIL or FAX: **aweatherbee@dot.state.nh.us**PHONE: **603-271-3667**

ELECTRONIC COMMUNICATION: By initialing here \_\_\_\_\_, I hereby authorize DES to communicate all matters relative to this application electronically

**9. PROPERTY OWNER SIGNATURE:**

See the Instructions &amp; Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a copy of the application materials to the NH State Historic Preservation Officer.
8. I authorize DES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the New Hampshire Department of Environmental Services is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of DES correspondence. DES will not forward returned mail.



Property Owner Signature

Print name legibly

Date


11/11/15

## MUNICIPAL SIGNATURES

### 10. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.


		
Authorized Commission Signature	Print name legibly	Date

#### **DIRECTIONS FOR CONSERVATION COMMISSION**

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. The Conservation Commission signature should be obtained prior to the submittal of the original application and four copies to the town/city clerk for mailing to the DES.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will reviewed in the standard review time frame.

### 11. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 1991), I hereby certify that the applicant has filed five application forms, five detailed plans, and five USGS location maps with the town/city indicated below and I have received and retained certified postal receipts (or copies) for all abutters identified by the applicant.

			
Town/City Clerk Signature	Print name legibly	Town/City	Date

#### **DIRECTIONS FOR TOWN/CITY CLERK:**

Per RSA 482-A:3, I(d):

1. For applications where "Expedited Review" is checked on page 1, accept the application for mailing only if the Conservation Commission signature has been sought;
2. Collect the postal receipts demonstrating that all abutters and the Local Advisory Committee were sent proper notice;
3. Collect any administrative fees, not to exceed \$10 plus the cost of postage by certified mail (RSA 482-A:3, I).
4. IMMEDIATELY sign the original application and four copies in the signature space provided above;
5. Retain one copy of the application form, one complete set of attachments and the postal receipts demonstrating that all abutters and the Local River Advisory Committee were notified and make them reasonably accessible to the public;
6. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board in accordance with RSA 482-A:3, I; and
7. IMMEDIATELY send the ORIGINAL application form, one complete set of attachments and filing fee, by CERTIFIED MAIL to the NHDES Wetlands Bureau at the address indicated on page 1 of this application. (DO NOT HOLD FOR CONSERVATION COMMISSION SIGNATURE).



**12. IMPACT AREA:**

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact

Permanent: impacts that will remain after the project is complete.

Temporary: impacts not intended to remain (and will be restored to pre-construction conditions) after the project is complete.

After-the-fact (ATF): work completed prior to receipt of this application by DES. Check box to indicate ATF.

JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.		TEMPORARY Sq. Ft. / Lin. Ft.	
Forested wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Scrub-shrub wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Emergent wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Wet meadow		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Intermittent stream		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Perennial Stream / River	0 / 0	<input type="checkbox"/> ATF	418 / 39	<input type="checkbox"/> ATF
Lake / Pond	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Bank - Intermittent stream	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Bank - Perennial stream / River	72 / 28	<input type="checkbox"/> ATF	381 / 83	<input type="checkbox"/> ATF
Bank - Lake / Pond	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Tidal water	/	<input type="checkbox"/> ATF	/	<input type="checkbox"/> ATF
Salt marsh		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Sand dune		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Prime wetland		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Prime wetland buffer		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Undeveloped Tidal Buffer Zone (TBZ)		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Previously-developed upland in TBZ		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Lake / Pond		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - River		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
Docking - Tidal Water		<input type="checkbox"/> ATF		<input type="checkbox"/> ATF
<b>TOTAL</b>	<b>72 / 28</b>		<b>799 / 122</b>	

**13. APPLICATION FEE:** See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of \$ 200

☒ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking) 871 sq. ft. X \$0.20 = \$ 174.20

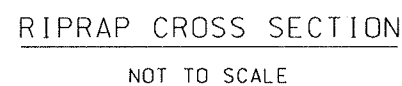
Temporary (seasonal) docking structure:                      sq. ft. X \$1.00 = \$

Permanent docking structure:                      sq. ft. X \$2.00 = \$

Projects proposing shoreline structures (including docks) add \$200 = \$

Total = \$

The Application Fee is the above calculated Total or \$200, whichever is greater = \$ 200.00







RIPRAP GRADATION  
D15 < 12"  
D50 < 16"  
D100 < 36"

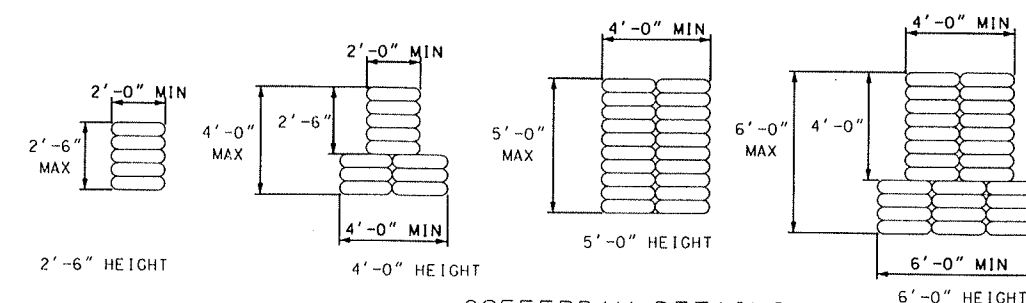
WETLAND IMPACT SUMMARY					
WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA		
			PERMANENT IMPACTS		TEMPORARY IMPACTS
			N.H.W.B. (NON-WETLAND)	N.H.W.B. & A.C.O.E. (WETLAND)	
			SF	SF	SF
1	R2UB1	A			177
2	BANK	B	17		142
2	BANK	C	34		75
1	R2UB1	D			241
2	BANK	E	21		112
2	BANK	F			52
		G			
		H			
		I			

PERMANENT IMPACTS:	72 SF
TEMPORARY IMPACTS:	799 SF
<hr/>	
TOTAL IMPACTS:	871 SF

WETLAND CLASSIFICATION CODES	
R2UB1	RIVERINE, LOWER PERENNIAL, UNCONSOLIDATED BOTTOM, COBBLE GRAVEL
BANK	

### LEGEND

TYPE OF WETLAND IMPACT	SHADING/ HATCHING	#	WETLAND DESIGNATION NUMBER
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)		#	WETLAND IMPACT LOCATION
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)		#	WETLAND MITIGATION AREA
TEMPORARY IMPACTS			
EXISTING PIPE			

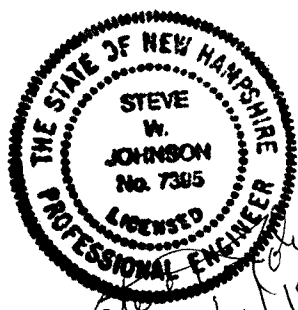


## COFFERDAM DETAILS

NOT TO SCALE

WETLANDS DELINEATED BY FB ENVIRONMENTAL ON 11/2013

STATE OF NEW HAMPSHIRE											
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE											
TOWN		SUGAR HILL		BRIDGE NO.		212/126		STATE PROJECT		40489	
LOCATION		NH RTE. 18, RTE 116 OVER INDIAN CREEK									
WETLAND IMPACTS										BRIDGE SHEET	
REVISIONS AFTER PROPOSAL				BY		DATE		BY		DATE	
				DESIGNED		ANW		12/15/15		CHECKED	
				DRAWN		ANW		12/15/15		CHECKED	
				QUANTITIES						CHECKED	
				ISSUE DATE				FISCAL YEAR		CREW	
				REV. DATE				2016		02	
								SHEET NO.		1	
										TOTAL SHEETS	
										1	



WETLAND IMPACTS

SCALE: 1" = 20'-0"

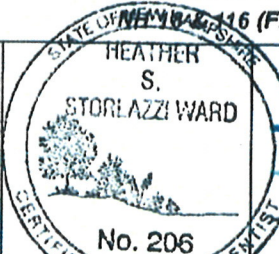


# Attachment A. Delineation Plan



## NHDOT Wetland and Stream Delineation

116 (Franconia Road) Over Indian Creek, Sugar Hill, NH



- Invasive Plant
- Top-of-Bank
- Ordinary High Water
- Roads



Data Sources: NH GRANIT, NWI, FBE  
Coordinate System: NH State Plane  
Map created by FB Environmental, 2013



Notes: Wetlands were delineated in accordance with the 1987 US Army Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual, Northcentral and Northeast Region, v2.0 January 2012.

## SUMMARY REPORT- SUGAR HILL, NH

### GENERAL SITE DESCRIPTION

The Sugar Hill site is located along State Route 116/18 (Franconia Road) where it crosses Indian Creek. Indian Creek is located within the Waits watershed and flows generally southwest to the Gale River. The survey area includes lands located 50 feet upstream and downstream of the existing bridge and 50 feet along each bridge approach a distance of 50 feet from the centerline of Franconia Road (Attachment A). Wetland and stream assessments were conducted on November 13, 2013.

The environs surrounding the site consist of rural homesteads, fields, and undeveloped woodlands. Land directly adjacent to and within the survey consists of a residential home and driveway, shrubby floodplains and field. Soils within the survey area consist primarily of Chroghan loamy fine sand (Attachment B). The Chroghan soil series consists of very deep, moderately well drained soils formed in deltaic or glacio-fluvial deposits.

### WETLAND TYPE /CLASSIFICATION AND STREAM DELINEATION

No wetlands are shown on an NWI map of the area (Attachment C). This was field verified.

Top of bank (TOB) and ordinary high water (OHW) was flagged along Indian Creek for the entire portion of the stream within the survey area (Attachments A & D). The substrate is comprised of sands with many cobbles and boulders throughout the streambed. The width averages about 15 feet across the survey area. The north bank on the west side of the road has been filled to the edge of the stream, along a residential driveway. A field-stone retaining wall supports the bank from the culvert to the west.

### EXTENT OF INVASIVE SPECIES

A few discrete patches of invasive plants were observed in the survey area including Tatarian honeysuckle (*Lonicera tatarica*), purple loosestrife (*Lythrum salicaria*), and glossy false buckthorn (*Frangula alnus*). Small shrubs or patches of purple loosestrife and glossy false buckthorn were documented around the culvert inlet on the east side of the road. A single honeysuckle was documented along the stream bank on the west survey extent (Attachment A).

### NATURAL HERITAGE REVIEW

The NHB query produced a positive result. However, the NHB determined that although there was a record found in the vicinity, it was unlikely to be impacted by the proposed project (Attachment E).

### TYPE AND EXTENT OF RARE PLANTS/NATURAL COMMUNITIES

No rare plants or exemplary natural communities were observed within or in the vicinity of the survey area.



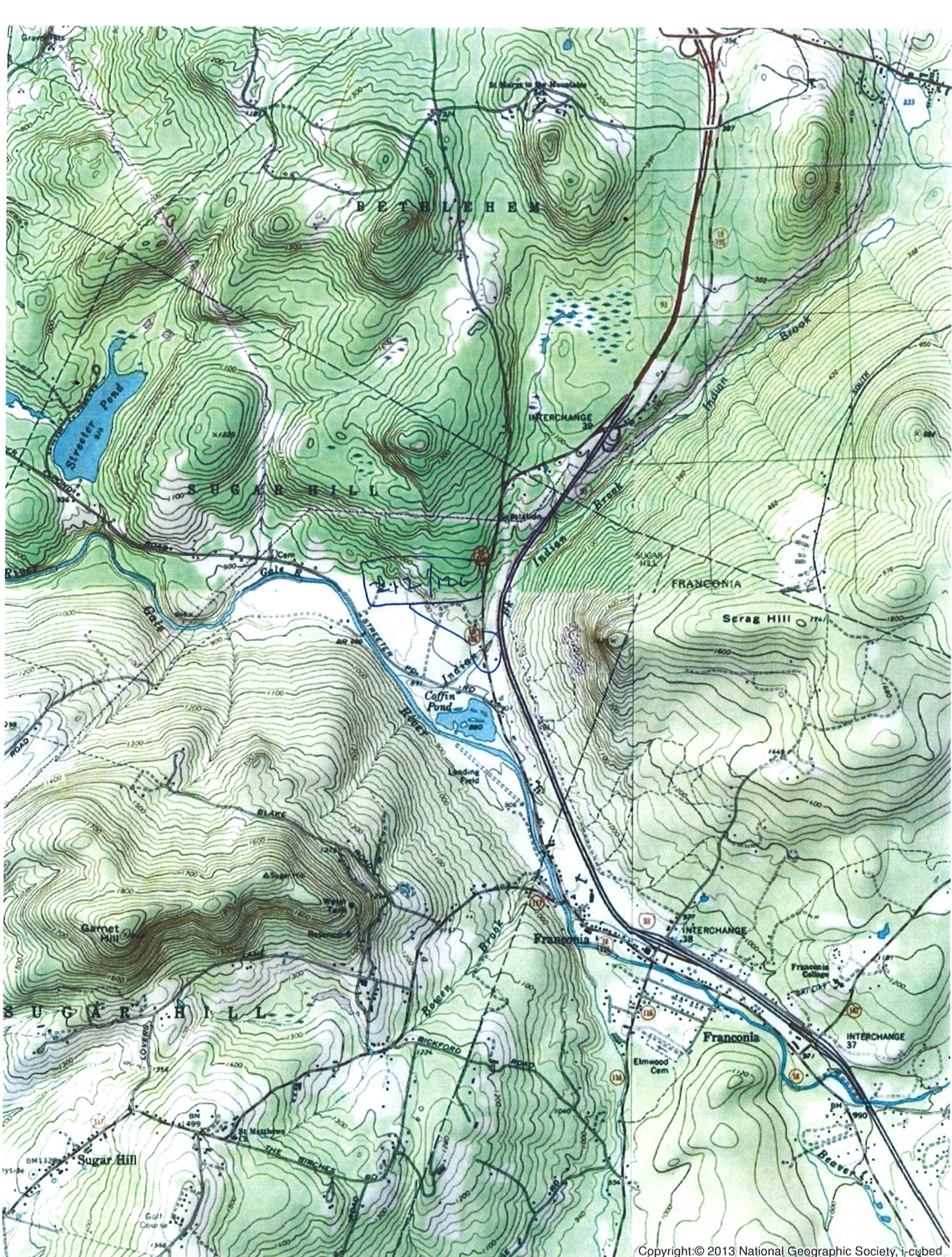
## **CONSTRUCTION SEQUENCE**

1. Sandbag cofferdams will be placed in the brook.
2. Phase 1 of the concrete substructure will be constructed.
3. Traffic will be switched.
4. Phase 2 of the concrete substructure will be constructed.
5. The metal pipe will be removed.
6. The concrete deck will be placed.
7. The site will be restored to its original condition.

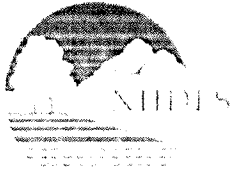
**Note:**

Project will use and maintain DES Best Management Practices at all stages of construction.









THE STATE OF NEW HAMPSHIRE  
DEPARTMENT OF ENVIRONMENTAL SERVICES  
LAND RESOURCES MANAGEMENT  
**WETLANDS BUREAU**

29 Hazen Drive, PO Box 95, Concord, NH 03302-0095

Phone: (603) 271-2147 Fax: (603) 271-6588

<http://des.nh.gov/organization/divisions/water/wetlands/index.htm>

Permit Application Status: <http://des.nh.gov/onestop/index.htm>

**PERMIT APPLICATION – ATTACHMENT A**  
**MINOR & MAJOR 20 QUESTIONS**

Env-Wt 302.04 Requirements for Application Evaluation – For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing metal pipe is on the state red list. The invert has up to 50% section loss in the last 10'-0" at the outlet. The pipe is extensively holed throughout. A portion of the structure is buckled and there are small voids throughout. The impacts are for temporary construction access and for riprap. If the structure is not rehabilitated, it will eventually be load posted or closed. Because the structure being constructed is 31'-4" wide with a 22'-0" span, and the existing structure is 58'-0" wide with an 8'-9" span, the net change in wetland area is positive. There will be 72ft<sup>2</sup> of wetlands lost due to riprap and there will be 602ft<sup>2</sup> of wetlands created by replacing the metal pipe with a concrete bridge. The net change of this project as proposed is 530ft<sup>2</sup> and 58 linear feet of created wetlands.

2. That the alternative proposed by the applicant is the one with the least impact to the wetlands or surface waters on site.

The alternatives considered are as follows:

Install a concrete invert: The structure is too far deteriorated for a concrete invert to be placed in the pipe and the structure routinely floods; therefore it would be more beneficial to replace the pipe rather than install an invert.

In the December 16, 2015 Natural Resource Agency Coordination Meeting it was requested by Gino Infascelli that the permanent impacts for riprap be reduced, if possible. It was decided that the riprap could be excluded from the center 10'-0" of the channel and it could be reduced downstream as well. Proposed riprap was brought down from 736ft<sup>2</sup> to 72ft<sup>2</sup>. This will allow natural vegetation on the banks to remain.

3. The type and classification of the wetlands involved.

**R2UB1: Riverine, lower perennial, unconsolidated bottom, cobble gravel  
Bank**

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

**Indian Creek flows into the Gale River.**

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

**Indian Creek has not been identified as a rare surface water of the state.**

6. The surface area of the wetlands that will be impacted.

**418ft<sup>2</sup> Riverine (418ft<sup>2</sup> temporary, 0ft<sup>2</sup> permanent)  
(560ft<sup>2</sup> Riverine created)  
453ft<sup>2</sup> Bank (381ft<sup>2</sup> temporary, 72ft<sup>2</sup> permanent)  
(42ft<sup>2</sup> Bank created)**

7. The impact on plants, fish, and wildlife, but not limited to:

- a. Rare, special concern species;
- b. State and federally listed threatened and endangered species;
- c. Species at the extremities of their ranges;
- d. Migratory fish and wildlife;
- e. Exemplary natural communities identified by the DRED-NHB; and
- f. Vernal pools.

**a. No rare or special concern species were identified within the proposed project area.**

**b. The results of the NHB search identified Faxon's Hawthorne and Loesel's wide-lipped orchid nearby. The Department has coordinated with NHB-DRED and it was determined that Amy Lamb, NHB-DRED would visit the site in spring/early summer of 2016 to determine if these species are within the project area prior to the commencement of any work. Should either of the plant species be encountered during her field review she will coordinate with the Department/Bridge Maintenance to determine if they can be avoided and/or relocated as necessary? The IPaC results indicated Northern Long-eared Bats (NLEB). The Bureau of Bridge Maintenance will be completing a Bridge Inspection Form no more than 7 days prior to commencing construction. If no signs of bat utilization are observed, and no clearing is proposed, the project will have No Effect on NLEB. If any signs of bat utilization are observed, work will not commence until coordination with USFWS and NHDOT Bureau of Environment has been completed.**

**c. There are no species known to be at the extremities of their ranges located in the project area.**

**d. Migratory fish and wildlife will be protected under the direction of NH Fish and Game.**

**e. The Department has coordinated with DRED and the results of the NHB review revealed no records in this area.**

**f. There were no vernal pools identified and/or delineated in the project area.**

8. The impact of the proposed project on public commerce, navigation and recreation.

**During construction, access to the nearby residents and/or commercial businesses will be maintained at all times. Access will be maintained by alternating traffic with a one lane closure or a short term detour. Indian Creek is non-navigable water which makes it non-conducive to boaters. During construction fishing activities from the banks of the brook will need to occur outside of the construction work zone. When construction is completed, the project as proposed will be a benefit to the public commerce.**

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

**The project will not significantly interfere with the aesthetic interests of the general public. The proposed structure will be more pleasing to the eye than the existing pipe in poor condition.**

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

**The project will not interfere with or obstruct public rights of passage or access. During construction at least one lane of alternating traffic will be maintained at all times or a short term detour will be in place. This will ensure access to all nearby businesses and residential homes in this area. Upon completion of this project the bridge will be reopened to two way traffic.**



11. The impact upon the abutting pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to riprap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

**The project is expected to have a positive impact on abutting properties. The proposed structure will better serve the abutting properties if they need to travel on the road. The riprap that is being installed will help prevent a washout of the structure which will better protect abutting properties.**

**The project as proposed will reduce the chance of flooding on abutting properties.**

12. The benefit of a project to the health, safety, and well-being of the general public.

**The project will provide a safer, longer lasting structure and roadway. If the structure is not replaced, the bridge will eventually be load posted or closed. Keeping the roadway open benefits commerce, trade, emergency access, etc, for the general public.**

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and difference in the quality of water entering and exiting the site.

**The surface water currently runs off the road and into Indian Creek. Upon completion of the project surface will drain water in a similar manner. Water will run off the bridge at the curb lines, to the wingwalls, and then off the structure. This will have no adverse effects on the quality or quantity of surface and ground water. Best Management Practices will be used to prevent any adverse effect to water quality during construction.**

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

**Flooding: The proposed structure will have a larger opening will pass significantly more water. This will reduce the possibility of flooding in the area.**

**Erosion: The riprap placed on the banks will prevent erosion and preserve the natural alignment and gradient of the stream channel.**

**Sedimentation: Nothing that will be a barrier to sediment transport will be installed in this project.**

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

**Surface waters will not be reflected or redirected as a result of this project. Indian Creek does not have enough surface water for wave energy to be an issue.**

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alternations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage ownership of that wetland and the percentage of that ownership that would be impacted.

**The work consists of a replacement of an existing bridge structure. There are no similar structures in the vicinity owned by other parties that would require replacement.**

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

**The value of the wetland as a habitat for living organisms will be unchanged. The proposed wetlands created will**

increase the total wetlands therefore increasing potential habitat. The project will be constructed outside the fish spawning season. A function of Indian Creek is to carry water from a higher elevation to a lower elevation. This project will not interfere with that function.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

**This project is not located in or near any Natural Landmarks listed on the National Register.**

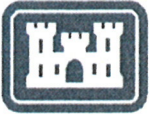
19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

**There are no areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, or national lakeshores that will be impacted as a result of this project.**

20. The degree to which a project redirects water from one watershed to another.

**The project as proposed will not redirect water from one watershed to another.**

Additional comments



**US Army Corps  
of Engineers®**

New England District

**New Hampshire Programmatic General Permit (PGP)  
Appendix B - Corps Secondary Impacts Checklist  
(for inland wetland/waterway fill projects in New Hampshire)**

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

<b>1. Impaired Waters</b>	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See <a href="http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm">http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm</a> to determine if there is an impaired water in the vicinity of your work area.*		X
<b>2. Wetlands</b>	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, <a href="http://www.nhnaturalheritage.org">www.nhnaturalheritage.org</a> , specifically the book <u>Natural Community Systems of New Hampshire</u> .		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	2744 ft <sup>2</sup>	
2.7 What is the size of the proposed impervious surface area?	2744 ft <sup>2</sup>	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	0%	
<b>3. Wildlife</b>	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)		X
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: <ul style="list-style-type: none"> <li>• PDF: <a href="http://www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm">www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm</a>.</li> <li>• Data Mapper: <a href="http://www.granit.unh.edu">www.granit.unh.edu</a>.</li> <li>• GIS: <a href="http://www.granit.unh.edu/data/downloadfreedata/category/databycategory.html">www.granit.unh.edu/data/downloadfreedata/category/databycategory.html</a>.</li> </ul>		X

3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	
<b>4. Flooding/Floodplain Values</b>	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		N/A
<b>5. Historic/Archaeological Resources</b>		
For a minor or major impact project - a copy of the Request for Project Review (RPR) Form ( <a href="http://www.nh.gov/nhdhr/review">www.nh.gov/nhdhr/review</a> ) shall be sent to the NH Division of Historical Resources as required on Page 5 of the PGP**		N/A

\*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.

\*\* If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law..



**PART Env-Wt 404 CRITERIA FOR SHORELINE STABILIZATION**

The rehabilitation of the bridge that carries Rte. 18, 116 over Indian Creek proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Indian Creek. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

- (a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.
- (b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.
- (b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.
- (b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.
- (c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.
- (d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.
- (e) The enclosed plan has been stamped by a professional engineer.

## **MITIGATION REPORT**

This project is considered to be in compliance with the stream crossing rules and therefore mitigation is not required.

**NH Department of Transportation  
Bureau of Bridge Maintenance  
Project, # 40489**

**Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings**

New Tier 2 Crossings;  
Replacement Tier 2 Crossings that have a history of flooding;  
New & Replacement Tier 3 Crossings

Please describe how the project meets the following criteria:

- (a) The crossing shall be designed in accordance with the NH Stream Crossing Guidelines. The full span as proposed by the NH Stream Crossing Guidelines is 22'-0" and this span will be met. The existing slope and alignment will be matched. The existing stream bed bottom is currently a metal pipe and the proposed stream bed bottom will be a natural bottom. Wildlife will have a flat 2'-0" shelf above the water on both sides of the waterway below the structure to accommodate passage. The slopes under the structure will match the existing banks upstream and downstream of the structure. The proposed structure will maintain the flow depths found in the natural channel.
- (b) The design shall include bed forms and stream bed characteristics necessary to cause water depths and velocities within the crossing at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the crossing. Bed forms and stream bed characteristics will match the natural channel found upstream and downstream of the structure. This will cause water depths and velocities within the crossing at a variety of flows to be comparable to those found in the natural channel.
- (c) There shall be vegetated banks upstream and downstream of the crossing. The proposed structure will not be as wide as the existing structure. This will allow new bank to be created on either side of the proposed structure. The existing banks will remain unchanged.
- (d) The natural alignment and gradient of the stream channel shall be preserved so as to accommodate natural flow regimes and the functioning of the natural floodplain. The natural alignment and gradient of the stream channel shall be preserved so as to accommodate natural flow regimens and the functioning of the natural floodplain.
- (e) The 100-year flood frequency shall be accommodated to ensure that there is (1) no increase in flood stages on abutting properties and (2) flow and sediment transport characteristics will not be affected in a manner that could adversely affect channel stability. The existing structure is currently under sized and does not pass the 100-year flood. The proposed structure will have a larger opening and will pass the 100-year flood event. This will decrease flood stages on abutting properties. Flow and sediment transport characteristics will not be affected in a manner that could adversely affect channel stability.
- (f) A natural stream channel shall be simulated through the structure. The proposed stream channel shall simulate the natural stream channel.

(g) Sediment transport competence shall not be altered.  
Sediment transport competence shall not be altered as a result of this project.

A Tier 2 stream crossing shall be a span structure, pipe arch embedded with stream simulation, open-bottom culvert with stream simulation, or closed-bottom culvert embedded with stream simulation.

A Tier 3 stream crossing shall be a span structure or an open-bottom culvert with stream simulation.

**If any of the above criteria cannot be met, approval for an alternative design must be requested and a technical report (Env-Wt 904.09) must be included with the application package.**

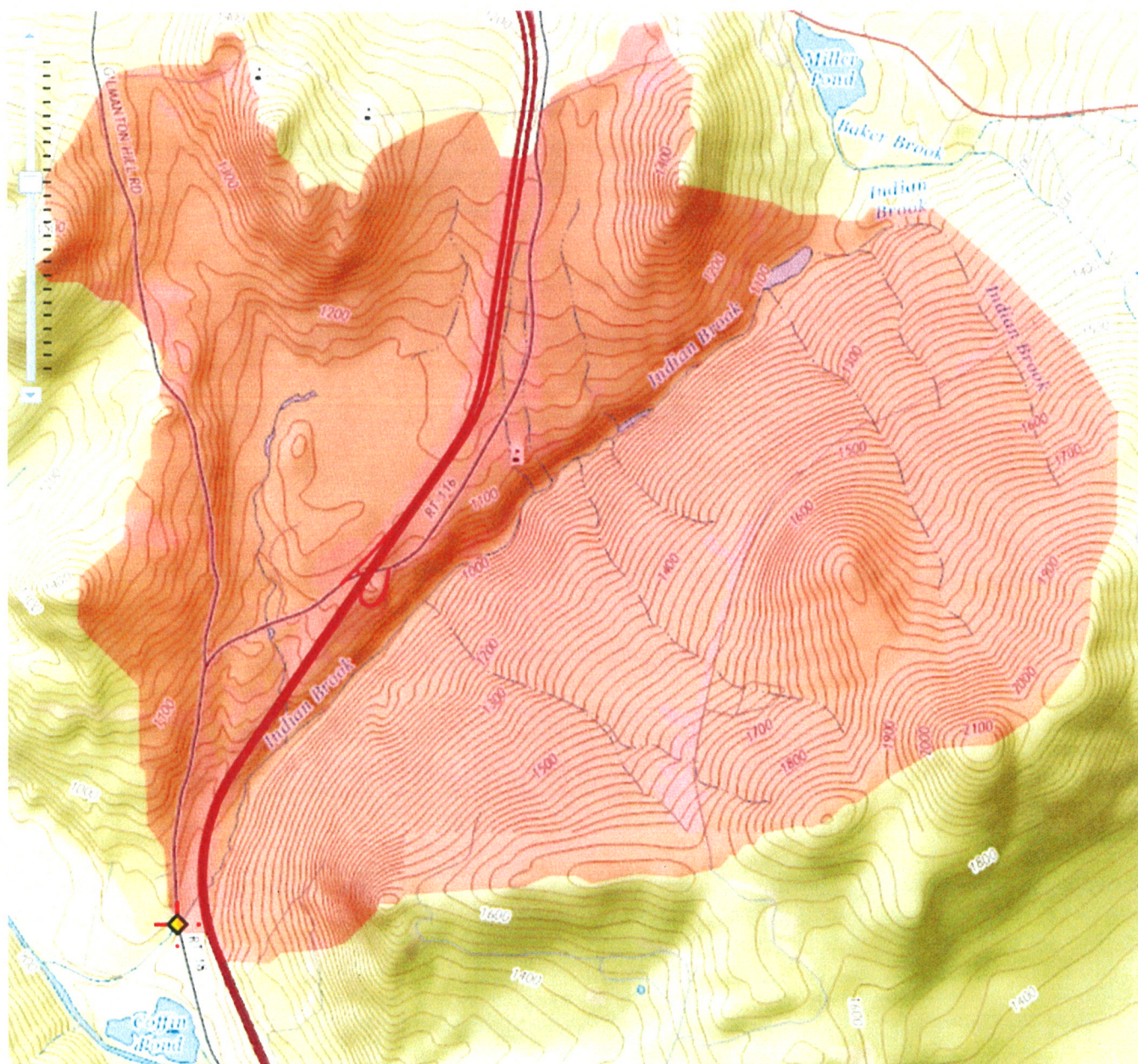


**Hydraulic Data**

Drainage Area – 5.26 sq mi

Q 100 = 589 cfs.

The proposed structure is expected to pass a 100-year flood event.



**Figure 7: Watershed**



## Memo



NH NATURAL HERITAGE BUREAU  
NHB DATACHECK RESULTS LETTER

**To:** Tony Weatherbee, New Hampshire Department of Transportation  
7 Hazen Drive  
Concord, NH 03302

**From:** Amy Lamb, NH Natural Heritage Bureau

**Date:** 1/6/2016 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau

NHB File ID: NHB15-3797

Town: Sugar Hill

Location: NH Rte. 18 over Indian Creek

Description: 8'-9" by 6'-0" metal pipe will be replaced with a concrete slab bridge.

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

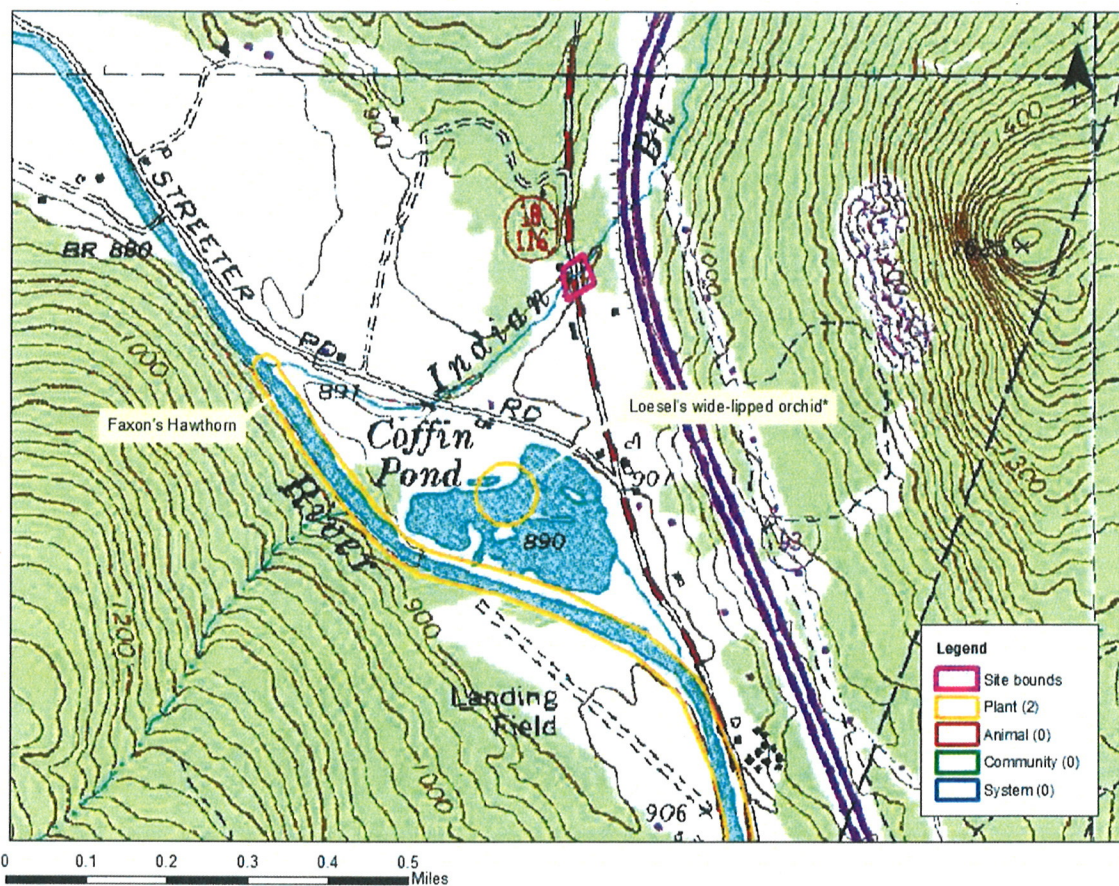
**Comments:** The two rare plants listed below occur nearby, and could occur within the project area. The NH rare plant list is currently being revised, and Faxon's Hawthorn will be listed as state endangered in 2016. Please send photos so that we may determine if there is appropriate habitat onsite. If appropriate habitat exists, NHB would recommend a survey for these two rare plants, to be conducted during the growing season (preferably late June/July) when the plants are identifiable. Please send site photos to me at [Amy.Lamb@dred.nh.gov](mailto:Amy.Lamb@dred.nh.gov).

Plant species	State <sup>1</sup>	Federal	Notes
Faxon's Hawthorn ( <i>Crataegus faxonii</i> )	--	--	Threats to this early-successional and disturbed habitat species include destruction of its habitat and natural succession.
Loesel's wide-lipped orchid ( <i>Liparis loeselii</i> )*	T	--	This inconspicuous orchid occurs in a variety of wet, sunny habitats. Threats include succession (reforestation), habitat destruction (e.g., changes in local hydrology), and herbivory (including grazing by deer).

<sup>1</sup>Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (\*) indicates that the most recent report for that occurrence was more than 20 years ago.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

NHB15-3797





# New Hampshire Natural Heritage Bureau - Plant Record

### Faxon's Hawthorn (*Crataegus faxonii*)

### Legal Status

Federal: Not listed  
State: Not listed

### **Conservation Status**

Global: Demonstrably widespread, abundant, and secure  
State: Critically imperiled due to rarity or vulnerability

### Description at this Location

Conservation Rank: Not ranked  
Comments on Rank:

Detailed Description: 2008: Specimen collected.

General Area:

General Comments:

## Management

Comments:

## Location

Survey Site Name: Gale River, near Coffin Pond  
Managed By: Coffin Pond

County: Grafton

Town(s): Sugar Hill

Size: 21.7 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: 2008: Along Gale River, off Rte. 18/116, Sugar Hill.

### Dates documented

First reported:	2008
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Last reported:	2008
----------------	------

## New Hampshire Natural Heritage Bureau - Plant Record

Loesel's wide-lipped orchid (*Liparis loeselii*)**Legal Status**

Federal: Not listed  
State: Listed Threatened

**Conservation Status**

Global: Demonstrably widespread, abundant, and secure  
State: Imperiled due to rarity or vulnerability

**Description at this Location**

Conservation Rank: Historical records only - current condition unknown.

Comments on Rank:

Detailed Description: 1972: Specimen collected. No details recorded.

General Area: 1972: Boggy shore of Joe Coffin Pond.

General Comments: 1972: Also seen 1972-07-19 by same source.

Management

Comments:

**Location**

Survey Site Name: Joe Coffin Pond

Managed By: Coffin Pond

County: Grafton

Town(s): Sugar Hill

Size: 2.8 acres

Elevation: 890 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Joe Coffin Pond.

**Dates documented**

First reported: 1972 06-30

Last reported: 1972-06-30

## Matt Urban

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**From:** Lamb, Amy <Amy.Lamb@dred.nh.gov>  
**Sent:** Friday, January 22, 2016 8:59 AM  
**To:** Matt Urban  
**Subject:** RE: Sugarhill 40489

Thank you Matt. **Yes, that sounds fine.** I do realize that impacts beyond the existing structure would be small, but in the photos it looks like there could be appropriate habitat for either plant. I will coordinate with you/Tony in the spring.

-Amy

Amy Lamb  
Ecological Information Specialist  
(603) 271-2215 ext. 323

NH Natural Heritage Bureau  
DRED - Forests & Lands  
172 Pembroke Rd  
Concord, NH 03301

**From:** Matt Urban [<mailto:MUrb@dot.state.nh.us>]  
**Sent:** Friday, January 22, 2016 8:20 AM  
**To:** Lamb, Amy  
**Cc:** Anthony Weatherbee  
**Subject:** RE: Sugarhill 40489

Hi Amy,

After I sent my last email I continued completing my review of the wetlands application and I just read in the Nat Res Minutes that this was the project you had indicated you would like to review in the field. Tony indicated the work was planned for the summer and I believe you indicated you would be able to review the site spring/early summer. **Would you be okay with me indicating in the wetland application that you plan to do this review spring/summer prior to any work and if at that time any species are identified within our project impact area you will coordinate with the Department/Bridge Maintenance on the possible avoidance or relocation as necessary.**

Thanks  
Matt

**From:** Matt Urban  
**Sent:** Thursday, January 21, 2016 1:45 PM  
**To:** Amy Lamb  
**Subject:** Sugarhill 40489

Hi Amy,

We received the results of the NHB indicating that there was a nearby presence of Faxon's Hawthorn and Loesel's wide-lipped orchid in the project area.



It appears that the Faxons Hawthorn is occurring on the Gale River with no indications present on Indian Creek itself and the Loesel's appears to be occurring in Coffin Pond.

I have attached some photos of the inlet and outlet where impacts will occur.

I have also attached a plan that shows the impact areas.

In this project we are actually replacing an existing Arch pipe with a bridge. In doing so the new bridge is actually less in length when measured parallel to the stream than the existing arch so there will be little to no impacts extending much beyond the existing inlet and outlet. Roadway will be removed to provide the 22' open span for the new bridge.

Let me know if you have any questions.

Thanks,

Matt



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 COMMERCIAL STREET, SUITE 300  
CONCORD, NH 03301  
PHONE: (603)223-2541 FAX: (603)223-0104  
URL: [www.fws.gov/newengland](http://www.fws.gov/newengland)

Consultation Code: 05E1NE00-2016-SLI-0710

January 07, 2016

Event Code: 05E1NE00-2016-E-00924

Project Name: Sugar Hill 212/126

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment





United States Department of Interior  
Fish and Wildlife Service

Project name: Sugar Hill 212/126

## Official Species List

### Provided by:

New England Ecological Services Field Office  
70 COMMERCIAL STREET, SUITE 300  
CONCORD, NH 03301  
(603) 223-2541  
<http://www.fws.gov/newengland>

**Consultation Code:** 05E1NE00-2016-SLI-0710

**Event Code:** 05E1NE00-2016-E-00924

**Project Type:** BRIDGE CONSTRUCTION / MAINTENANCE

**Project Name:** Sugar Hill 212/126

**Project Description:** The project is located at the bridge that carries Rte. 18 over Indian Creek. The existing metal pipe will be replaced with a concrete slab bridge. The bridge replacement will take place from May 2016 to September 2016.

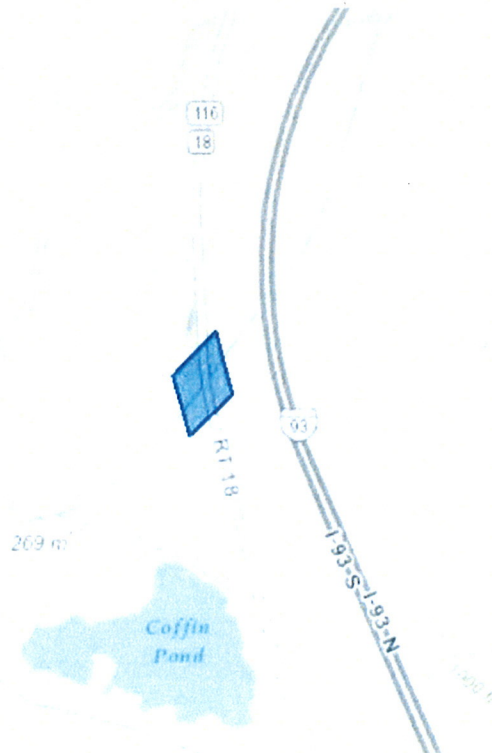
**Please Note:** The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.



United States Department of Interior  
Fish and Wildlife Service

Project name: Sugar Hill 212/126

### Project Location Map:



**Project Coordinates:** MULTIPOLYGON (((-71.76340341567993 44.246520943073904, -71.76243782043457 44.247258750353225, -71.76206231117249 44.24622120622324, -71.76301717758179 44.24557561397278, -71.76340341567993 44.246520943073904)))

**Project Counties:** Grafton, NH



United States Department of Interior  
Fish and Wildlife Service

Project name: Sugar Hill 212/126

## Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

Mammals	Status	Has Critical Habitat	Condition(s)
Northern long-eared Bat ( <i>Myotis septentrionalis</i> )	Threatened		





United States Department of Interior  
Fish and Wildlife Service

Project name: Sugar Hill 212/126

## **Critical habitats that lie within your project area**

There are no critical habitats within your project area.

## Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the enclosed Standard Dredge and Fill Application for potential impacts to historic properties.

### Above Ground Review

Known/approximate age of structure:

1950 corrugated metal arch pipe culvert (212/126) on NH RT 18/116 over Indian Creek

☒ No Potential to Cause Effect/No Concerns

☐ Concerns:

### Below Ground Review

Recorded Archaeological site: ☐ Yes ☒ No

Nearest Recorded Archaeological Site Name & Number: 27-GR-0031 NH Iron Factory Co

☐ Pre-Contact ☒ Post-Contact

Distance from Project Area:

1.371 miles (2.2 km) south of the project area

☒ No Potential to Cause Effect/No Concerns

The stream substrate is sands, cobbles and boulders throughout the streambed.

Although corrugated metal pipe arch (8'9" wide & 6'tall) will be replaced with 22' span concrete slab bridge, the area has been disturbed by the construction of the road, a road pull off, driveways, the culvert, associated grading and landscaping, and significant eroded banks.

In addition, the southeast quadrant has been modified for use as a graded unpaved parking area, the northeast quadrant is a graded gravel drive, and the northwest quadrant has been filled to the edge of the stream along a residential gravel drive. Most significantly, the plan primarily includes lengthening and widening within the roadway, thus construction is likely confined to already impacted areas.

No concerns.

☐ Concerns:

Reviewed by:

*Shirley Charles*  
*[Signature]*

NHDOT Cultural Resources Staff

1/19/2016

*1/20/2016*

Date:





Figure 1: South approach object marker in place. (11/2015).



Figure 2: North approach (10/2012).





**Figure 3: Typical scattered holes and perforations throughout the barrel (11/2015).**



**Figure 4: Holed invert at northwest near the outlet. (11/2015).**





Figure 5: Downstream elevation (10/2012).



Figure 6: Upstream elevation (10/2012).